

CLAIMS

1. A fuel cell separator comprising:

a separator body adapted to come into contact with a generating element to make electrical continuity to said generating element, thereby forming a generating cell;

a fluid oxidant supply channel formed on said separator body to supply a fluid oxidant to said generating element; and

fluid oxidant supplying means provided on said separator body for supplying said fluid oxidant into said fluid oxidant supply channel.

2. The fuel cell separator according to claim 1, wherein:

said fluid oxidant supply channel has an opening exposed to one end of said separator body; and

said fluid oxidant supplying means is provided at said opening to make a flow of said fluid oxidant in said fluid oxidant supply channel.

3. The fuel cell separator according to claim 2, wherein:

said fluid oxidant supply channel comprises a plurality of channels formed on said separator body;

each of said channels has said opening; and

said fluid oxidant supplying means comprises a plurality of supplying means respectively provided at said openings of said channels to individually make a flow of said fluid oxidant in said channels.

4. The fuel cell separator according to claim 2, wherein:

said fluid oxidant supply channel comprises a plurality of groups of adjacent channels formed on said separator body;

each of said groups of adjacent channels has said opening; and

said fluid oxidant supplying means comprises a plurality of supplying means respectively provided at said openings of said groups of adjacent channels to individually make a flow of said fluid oxidant in said groups of adjacent channels.

5. The fuel cell separator according to claim 1, wherein said fluid oxidant supplying means comprises an oscillating fan having a fin to be oscillated to make a flow of said fluid oxidant and an actuator for driving said fin.

6. The fuel cell separator according to claim 5, wherein said actuator comprises a piezoelectric bimorph.

7. The fuel cell separator according to claim 5,

wherein said actuator has a bimorph structure formed by laminating shape memory alloys.

8. The fuel cell separator according to claim 5, wherein said actuator has a bimorph structure formed of materials having different coefficients of thermal expansion.

9. The fuel cell separator according to claim 1, wherein said fluid oxidant supplying means comprises a diaphragm pump.

10. The fuel cell separator according to claim 2, wherein:

said fluid oxidant supply channel is formed inside of said separator body so as to extend along the surface of said separator body coming into contact with said generating element;

said opening is elongated in the transverse direction of said separator body; and

said fluid oxidant supplying means comprises a rotary fan having a rotating shaft extending in the longitudinal direction of said opening.

11. A fuel cell device having a fuel cell body formed by stacking a plurality of generating cells each composed of a generating element and a pair of fuel cell separators, one of said fuel cell separators comprising:

a separator body adapted to come into contact with said generating element to make electrical continuity to said generating element;

a fluid oxidant supply channel formed on said separator body to supply a fluid oxidant to said generating element; and

fluid oxidant supplying means provided on said separator body for supplying said fluid oxidant into said fluid oxidant supply channel;

said fluid oxidant supply channel comprising a plurality of channels each having an opening exposed to one end of said separator body;

said fluid oxidant supplying means comprising a plurality of supplying means respectively provided at said openings of said channels to individually supply said fluid oxidant through said channels to said generating element, thereby performing electric power generation in each generating cell.

12. An electronic applied device having a board and a plurality of fuel cell bodies provided on said board at required positions, each of said fuel cell bodies having a fuel cell separator and a generating element, said fuel cell separator comprising:

a separator body adapted to come into contact

with said generating element to make electrical continuity to said generating element;

a fluid oxidant supply channel formed on said separator body to supply a fluid oxidant to said generating element; and

fluid oxidant supplying means provided on said separator body for supplying said fluid oxidant into said fluid oxidant supply channel;

said fluid oxidant supply channel comprising a plurality of channels formed on said separator body;

said fluid oxidant supplying means comprising a plurality of supplying means for individually supplying said fluid oxidant to said channels;

electric power generated from said plurality of fuel cell bodies being supplied to various elements provided on said board.